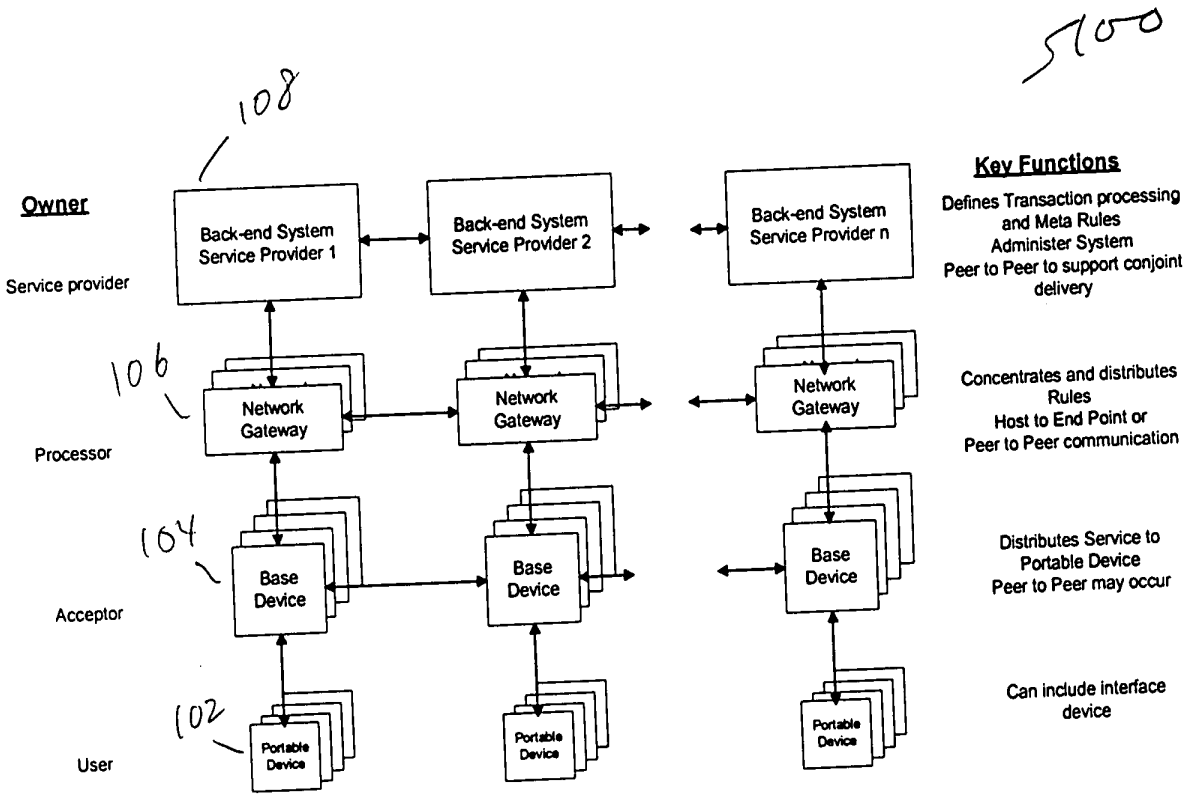

5100
108
Owner
Service provider
Back-end System Service Provider 1
Back-end System Service Provider 2
Back-end System Service Provider n
Key Functions
Defines Transaction processing and Meta Rules
Administer System
Peer to Peer to support conjoint delivery
106
Processor
Network Gateway
Network Gateway
Network Gateway
Concentrates and distributes Rules
Host to End Point or Peer to Peer communication
104
Acceptor
Base Device
Base Device
Base Device
Distributes Service to Portable Device
Peer to Peer may occur
102
User
Portable Device
Portable Device
Portable Device
Can include interface device

Fig. 1

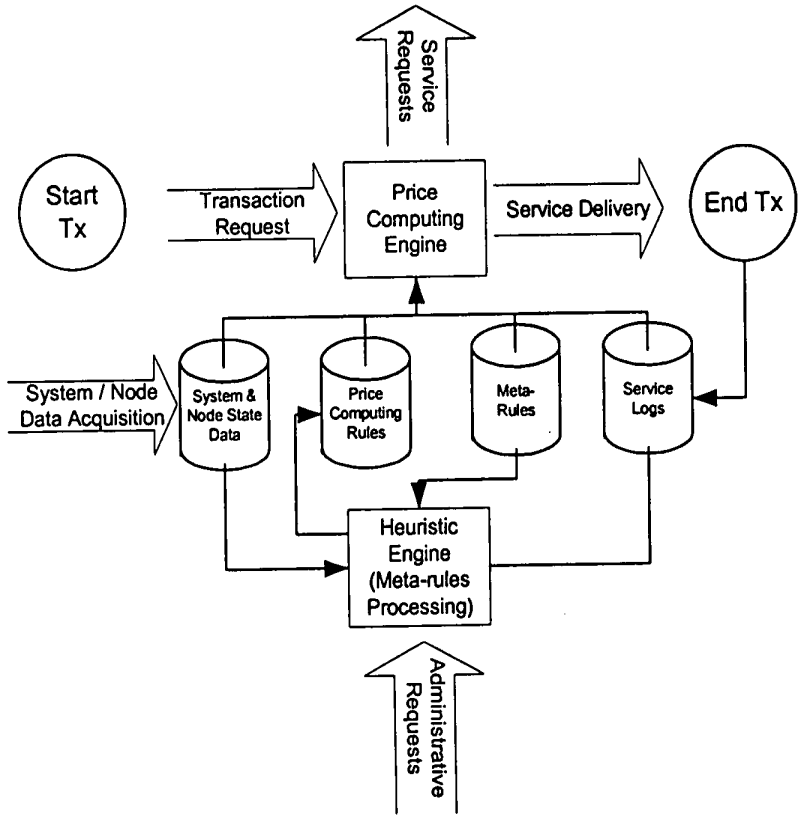
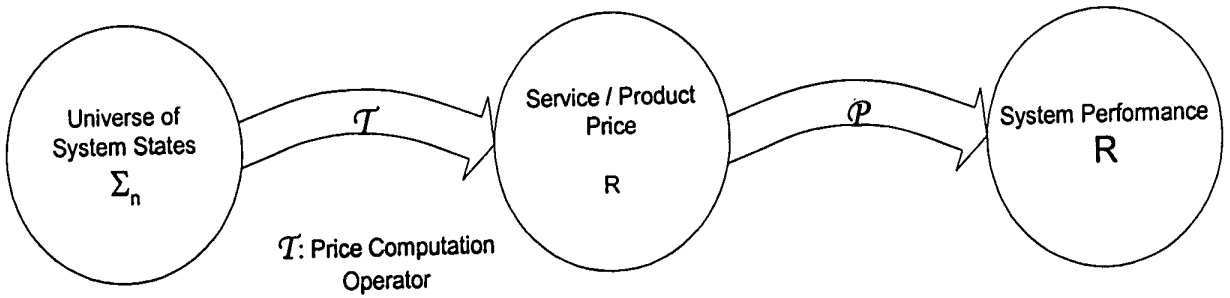
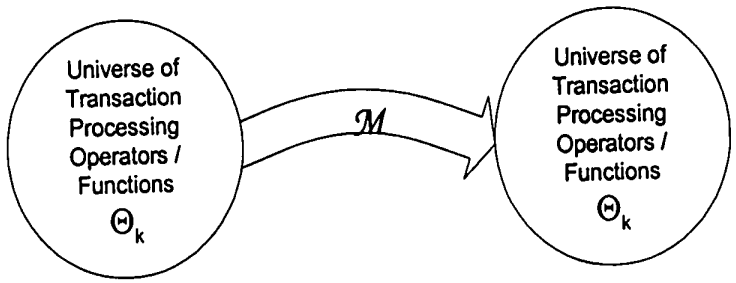

Service Requests
Start Tx
Transaction Request
Price Computing Engine
Service Delivery
End Tx
System / Node Data Acquisition
System & Node State Data
Price Computing Rules
Meta-Rules
Service Logs
Heuristic Engine (Meta-rules Processing)
Administrative Requests

Fig. 2



$\mathcal{T}$: Price Computation Operator

Price=$\mathcal{T}$(Input_States)



$\mathcal{M}$: Transaction Operator Equivalence function

$$\mathcal{T}_y = \mathcal{M}(\mathcal{T}_1, \mathcal{T}_2, \mathcal{T}_3, \ldots \mathcal{T}_n) \text{ if } \mathcal{P}(\mathcal{T}_y) \geq \mathcal{P}(\mathcal{T}_1, \mathcal{T}_2, \mathcal{T}_3, \ldots, \mathcal{T}_n)$$

Fig. 3

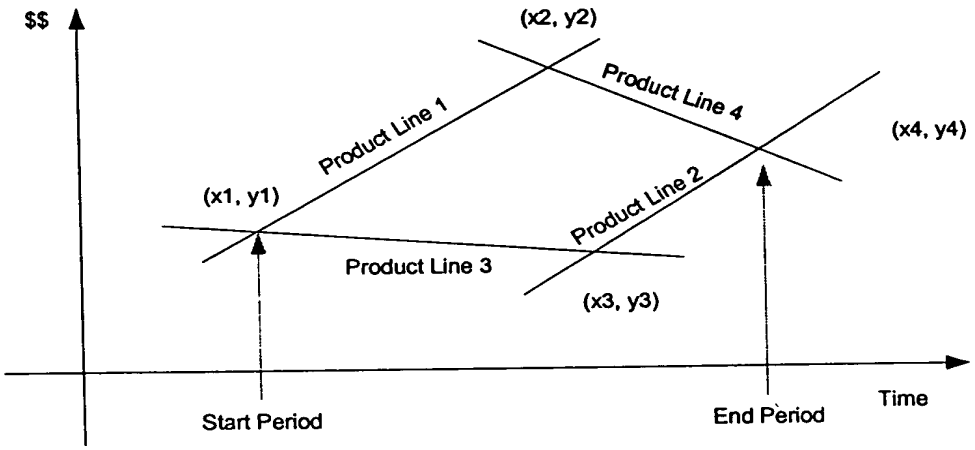

$$
(x2, y2)
Product Line 4
(x4, y4)
Product Line 1
(x1, y1)
Product Line 2
Product Line 3
(x3, y3)
Time
Start Period
End Period

Fig. 4

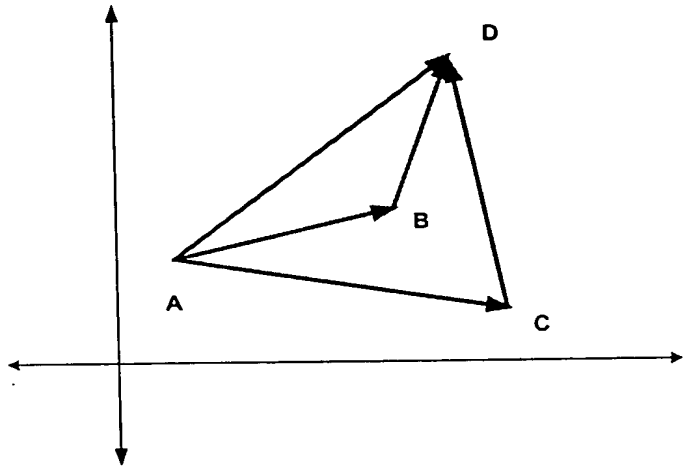

D
B
A
C

Fig. 5

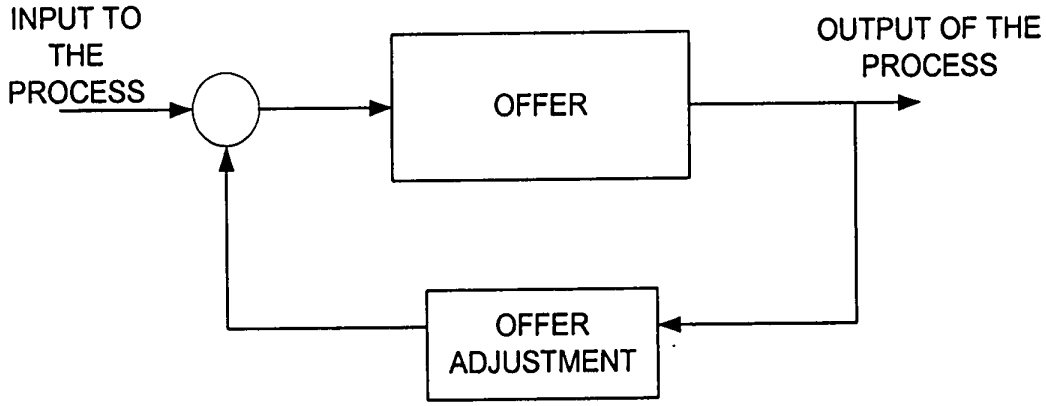

INPUT TO
THE
PROCESS
OFFER
OUTPUT OF THE
PROCESS
OFFER
ADJUSTMENT

Fig. 6